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MARCH, 1959

APR 22 1959

THE AIR LINE PILOT

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In This Issue: What If "D-Day" Were Tomorrow ? ? ?

THE AIR LINE PILOT

MARCH, 1959
Vol. 28, No. 3

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Entered as Second Class Matter at the Post Office at Chicago, Ill.

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Published Monthly by the Air Line Pilots Association, International, Affiliated with A. F. of L.-C.I.O. Publication offices: 55th Street and Cicero Avenue, Chicago 38, Illinois.

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Annual Subscription, $2.50.

On The Cover

Another step in the jet age will be taken late this summer when United Air Lines puts the DC-8 into service. By that time, more than 1,250 hours of operation under all conditions will have been completed. Evaluation of the plane by ALPA is well underway and should be completed by fall.

The model has already logged more than 315 air hours in 140 test flights. It has reached 42,000 feet and speeds up to 542 knots.

From the pilot's point of view, some innovations incorporated in the DC-8 include an electronic sensing device which helps avoid skids on slippery runways, a Kollsman integrated flight instrument system which is designed to avoid overlapping flight paths, a quick-load fuel system and an electrical system capable of producing 108,000 watts.

The DC-8 fuel capacity is 17,600 gallons—weighing more than a fully-loaded DC-7 at take-off. But all eight tanks can be filled in 20 minutes.

Five planes have already been placed in the exhaustive test program, and more will be tested shortly. This month steps toward government certification get underway.

Seven other models have been introduced by United in the past 25 years. The decision to add the DC-8 was made four years ago.

Along with the new jet, United is planning to introduce a weather-proof method of boarding and leaving Mainliners in bad weather. The air line has ordered nine "Jetway" loading enclosures. The first will be installed later this year at Idlewild Airport at New York. The passageways make it possible for passengers and crew to move directly from the terminal to the airliner without being exposed to outside weather. The "Jetway" can be extended from 52 feet to a maximum of 107 feet and can be placed in position alongside an airliner in 60 seconds.

What If D-Day Were Tomorrow?

Every Air Line Pilot Is Earmarked For Service Either With Their Ready Reserve Unit Or As Part Of The CRAF Or WASP Programs

In these days of tense international situations and cold wars verging on hot, the role of the commercial air lines in the event of a national emergency is a timely topic.

What happens to the scheduled air line industry if "D-Day" comes tomorrow? What air line pilots would be affected and how?

The answer, simply and directly: The air lines form the greatest civil air lift reserve in the world today and every air line pilot would be immediately affected.

Air lines would swing into domestic and global military service and be fully operational within 48 hours of a national emergency alert. As a group, here is what would happen to air line pilots: Those in the Ready Reserve go with their unit; of those not in the Ready Reserve, some go to CRAF (Civil Air Reserve Fleet); others to WASP (War Air Service Pattern).

CRAF and WASP

Although planning is never completely static and is constantly adapting to new appraisals, at the present time CRAF is composed of more than 300 long-range four-engine planes, allocated from the air lines. They would operate under military contracts on a global basis to support the military. Aircraft have been allocated to CRAF by the following air lines: Alaska, American, Braniff, Continental, Delta, Eastern, Flying Tiger, National, Northwest, Pacific Northern, Panagra, Pan American, Resort, Seaboard and Western, Slick, TWA, United, and Western. The air lines will furnish 3½ crews per airplane. This will involve 2,400 pilots or about 20% of ALPA's membership.

All remaining four- and twin-engine air line transport aircraft make up WASP, which provides a system of priority airlift in support of a domestic transportation at home operated to best suit the country's needs.

Generally speaking, therefore, CRAF provides military support airlifts to world destinations; WASP is a rescheduling of domestic and international air services for priority movement of passengers, mail, and cargo in support of an all-out defense in the zone of the interior. CRAF is projected for a short and rapid emergency support with estimated peak duration not to exceed thirty days. If a reduced international lift is needed after this period, it is projected that civil carrier contracts will be let in a manner similar to the Korean and Berlin Air Lifts. WASP will adjust itself as needed for the duration of any emergency.

Implementation

Implementation of CRAF, as presently contemplated, is reserved for the big one—as the result of a national emergency envisioning the attack of this country with thermonuclear weapons, with the actual battlefront possibily encompassing the entire world.

Retaliatory action would be immediate. Complete engagement would occur within 48 hours, and the fate of the nation would probably be determined within seven days or less.

The logistic answer would be found in the air. As we all know, the railroads are not currently providing the frequency of service they formerly did. Because of this curtailment, there is a question whether they even have enough rolling stock to duplicate the movement of war material and personnel carried in World War II. Also, bomb damage to a railroad formerly meant only temporary disruption while the holes were filled and the track replaced. In comparison, a thermo-nuclear bomb, dropped today on the marshalling yards in Chicago, for example, would immobilize and contaminate the area for months, or years, due to radiation. The effects on rail transportation in the midwest would be tremendous. The scope of the air movement necessary to replace this transport loss immediately would be enormous.

The job would be up to CRAF and WASP.

When the alert is sounded, CRAF planes, with their crews, would proceed to predetermined bases to be operated by the air lines under the supervision of the Military Air Transport Service (MATS). They would provide direct support to combat units.

These airliners are not in mothballs. They fly regular schedules every day in domestic and international commercial operations. With modifications already made and with special fittings installed to receive military gear, these planes can be adapted quickly to overseas military operations.

Pilot Preparedness

The pilots, of course, are already in a high state of proficiency in their air line jobs. The Association has taken and is continuing to take steps to integrate pilots into this program smoothly in all other respects as well. A Military Affairs Committee has been active since 1956 and at the 15th Convention recommended a program of pre-planning, expeditious negotiations of standby agreements, pre-assignment of pilots by bidding procedures so there is thorough preparation which would not be possible once a conflict starts.

"This is necessary," the Military Affairs Committee pointed out, "because if the U. S. becomes a thermo-nuclear target, a completely flexible position must be maintained by ALPA. ALPA, as an organization must be able to function as an organization, not only for the best interests of the surviving membership, but for the nation. As a functioning organization, no matter how decimated the membership may be, it can be of benefit to the country. Attempting to struggle along through a war under rules made for peace time could result in untenable positions because of non-applicable rules. Or the inability to take appropriate action on an urgent problem.

In addition to planes and pilots, of course, ground personnel, shops, overhaul bases, spare parts and maintenance facilities of the air lines would be involved.

CRAF's capacity is estimated at 7.7 million ton miles daily, or the ability to fly 375,000 troops across the Atlantic each month and an equal number of evacuees on the turn-around.

It's done at a big savings to the taxpayer, too. If the government had to maintain such a reserve fleet, it would cost about 550 million dollars just to acquire it and another 350 million annually to maintain its readiness. Just training pilots alone would be prohibitively expensive and virtually impossible from a time standpoint. This is why a well-trained reservoir of air line pilots is extremely important to the national defense.

More pilots will be affected by WASP than CRAF: the remaining 80% of the pilots who are not in CRAF less those in the Ready Reserve.

WASP's Job

Our national economy and defense will be geared to support the striking force in time of national emergency and demands a tight system of swift air transport. This is the job of WASP.

WASP includes the air lines' maintenance, operational and traffic facilities; a network of established routes; a priority system of strategic cargo and passenger airlift, and flexibility to move quickly where needed.

By 1962, the air lines will be flying more than 400 pure and prop-jets. The big pure jet nearly doubles the typical reciprocal engine airliner in load capacity, speed and intercontinental range. All this would become part of the Civil Reserve Air Fleet.

As an important part of the national defense, air line pilots have been called upon in two great national emergencies. Within six months of Pearl Harbor, 1,200 of the air line pilot's group, which then numbered about 3,600, were engaged in the war effort. Some 60 airliners and crews from the U. S. air lines provided a Pacific airlift to support the U. N. effort in Korea.

A recent survey conducted by the ALPA indicated that about 2,745 air line pilots have some sort of Military Reserve affiliation. There were 932 in the Stand-by Reserve, 1032 in the Ready Reserve, 143 in the NAR and 638 with miscellaneous military reserve affiliations.

Necessity For Standby Fleet

The necessity for the standby fleet provided in current plans is summed up by Gen. Thomas D. White, USAF Chief of Staff: "The importance of commercial air carriers and general aviation as elements of United States air power has never been greater nor more influential than it is now."

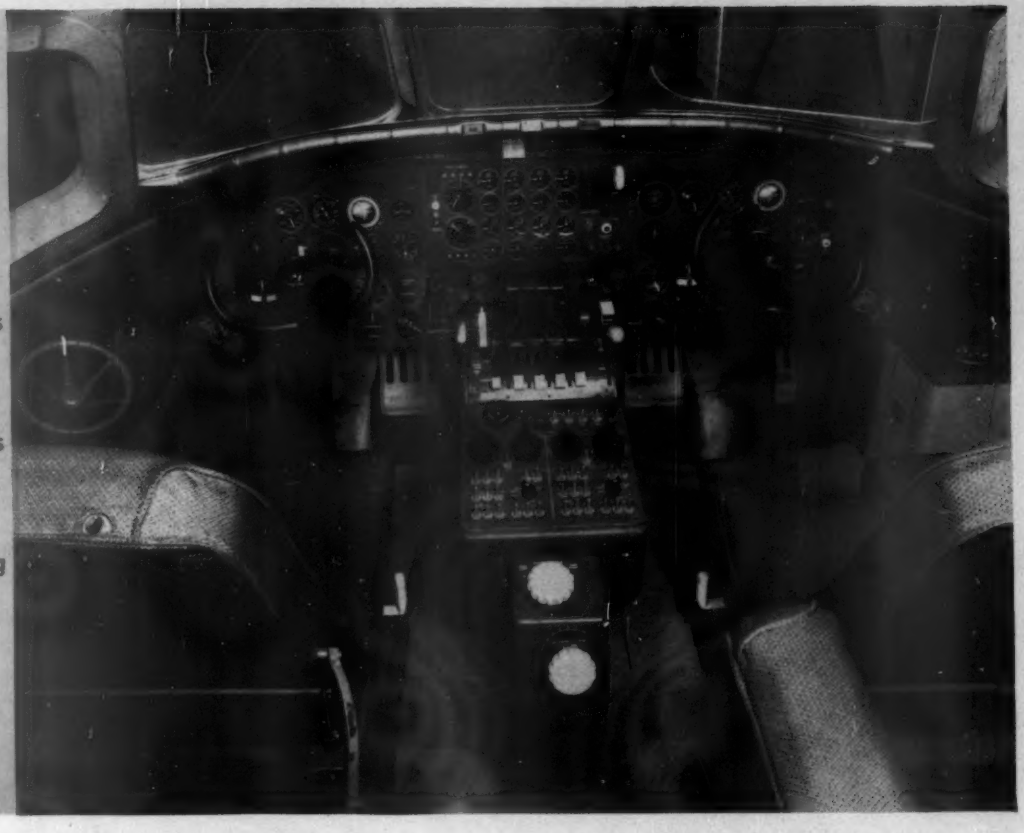
The air support program delegated to CRAF represents the most important national defense program ever demanded of the civil carriers. To be effective and operative, it must be crewed by flight-ready air line pilots. That is why the Association and the pilots it represents have and will continue to share the responsibility for the successful operation of both the CRAF and WASP Program.

ALPA Military Affairs Committee

The ALPA Military Affairs Committee was established in August of 1956. It's job: to make a study of the role all air line pilots should play in the event of war or national emergency. It's members consisted of pilots in reserve components as well as those who were not. They were: Roy Dooley (AA); Brig. Gen. Clayton Stiles (EAL), Commander of Air Force Reserve—Long Island wing and a member of the Air Force Reserve Policy Board; S. W. Hopkins (DAL) Navy Reserve Captain and a member of the Naval Reserve Policy Board; V. A. Peterson (EAL), Colonel U. S. Marines. Clark Luther, Region III Vice President, was made an ex-officio member, and S. A. Colvin, Lt. Col. Air Force Reserve, was appointed as Home Office Advisor and Liaison.

At the Fifteenth Convention last November, a Standing ALPA Military Affairs Committee was established by the Board of Directors to continue to monitor, plan, coordinate and make recommendations for pilot participation in war-readiness plans. As is the case in all committees of this nature, it is an advisory and reserve group, not a policy-making body. Current members of this Committee are: Brig. Gen. Clayton Stiles, Col. V. A. Peterson (EAL), Colonel U. S. Marines, and B. Anderegg (TWA), Commander USNR.

The Cockpit Of A Plane Poses One Of Most Difficult Jobs In Science Of Air Conditioning



The Cockpit Of The DC-8 Above, Had Special Ventilating Problems

In The DC-8:

Air Conditioning The "Pilot's Office"

By
W. W. REASER
Chief Air Conditiong Section
Douglas Aircraft Company

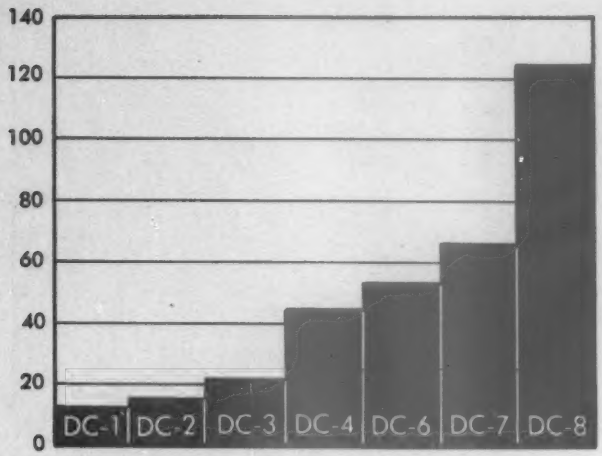
The Problems Associated With Temperature, Humidity And Ventilation Of Aircraft Cockpits, Increase As Aircraft Grow Larger And Fly Higher, The Author Reports

THE cockpit of an airplane presents the air conditioning engineer with one of the most interesting and difficult problems in the field of air conditioning science. Let us examine some of the various items that constitute this problem.

Immediately Apparent Problems

A few that become immediately apparent are:

- The heating and cooling loads are very large and over the year have required increased volumes of air to be supplied for the greater number of occupants (Fig. 1). This presents a very difficult problem of air distribution without causing draughts.
- If windshields are heated with hot air for ice protection or fog or frost prevention, the leakage of hot, dry air toward the face of flight crew members presents an undesirable condition.
- The glass areas of airplane cockpits have been greatly increased (Fig. 2) to give better visibility. This increases the heating and cooling loads because the heat transfer through glass surfaces is greater than through the cockpit walls.
- With a sealed compartment, and a prime requirement that it remain that way at all times, means of exhausting the vitiated air must be accomplished in such a way that smoke or odors do not obscure instruments or affect the breathing or vision of the crew.
- Because the supply air is at very low temperature,



NOMINAL PASSENGER LOAD

Figure 1

it contains very little moisture. This causes the relative humidity within the cockpit to be less than five per cent.

▸ The large glass areas require large structural members to give the structural strength. These members act as fins which cause large heat transfer and also create localized hot and cold spots.

▸ The electrical load (Fig. 3) has constantly increased.

▸ The airplane altitude and speed (Fig. 4) has greatly increased, resulting in lower outside air temperatures and greater kinetic heating temperature rises (Fig. 5).

Requirements To Be Met

Confronted with all of the foregoing problems, the Douglas Aircraft Co., decided that a test article was mandatory to develop a system which would provide the comfort required for the "pilots' office" of the DC-8 jet transport. This test article would have to meet several requirements:

• First, it would have to precede the final structural design in order to determine any changes required and still meet the schedule of the airplane.

SQUARE FEET

COCKPIT GLASS AREA

Figure 2

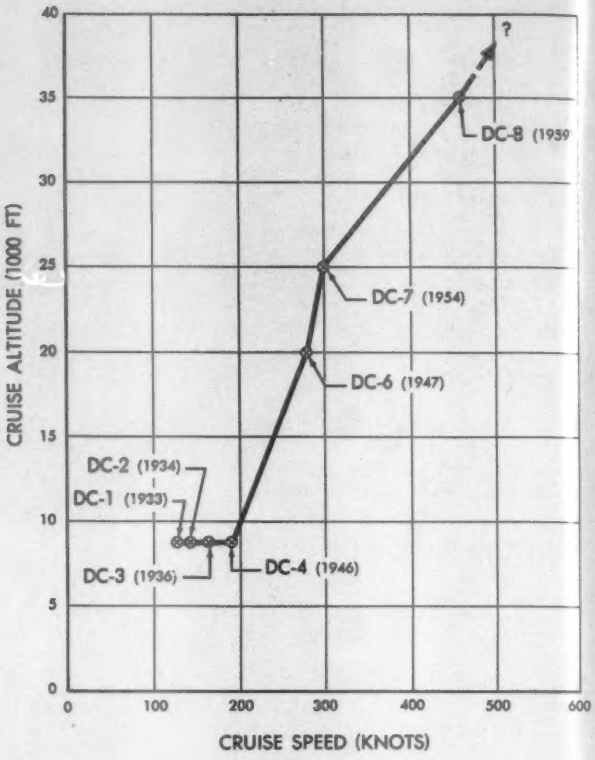
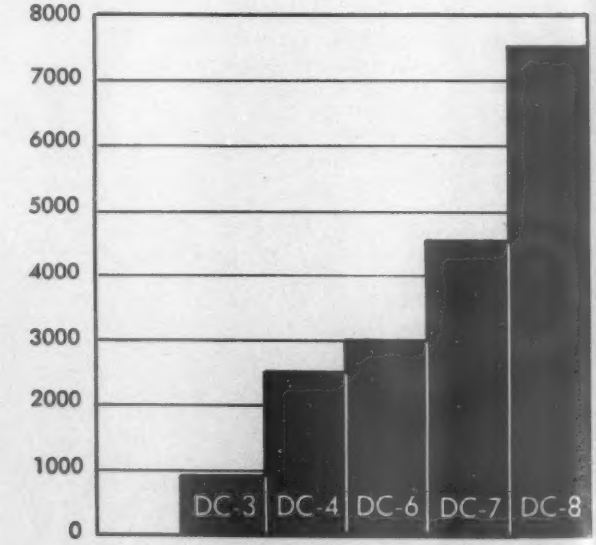


Figure 3

WATTS



COCKPIT EQUIPMENT HEAT LOADS

Figure 4

• Second, it would have to simulate the actual airplane thermally.

• Third, it would have to be exposed climatically to the full range of operation from the lowest to the highest outside temperature including sun load for the maximum durations of flight.

• Fourth, the interior of the test section, including seats, glass area, lights, radio rack, control pedestal, etc., would have to be provided.

Test Methods Used

The cockpit section (Fig. 6) and the cabin section (Fig. 7) were constructed several months ahead of the engineering release of the actual structure. This was possible because the design of the thermally simulated structure did not involve the engineering detail required in the actual design for structural strength.

To simulate the climatic conditions, the sections were placed in a climatic chamber which could maintain very low or high temperature. The variable which was controlled to simulate the airplane in flight was the airplane skin temperature. This variable has been well established for the various operating conditions of the airplane. For the low temperature conditions, the skin temperature was held at —55 degrees Fahrenheit. This simulates —100 degrees Fahrenheit ambient temperature in flight. The difference in temperature is caused by the kinetic heating of the skin created by the speed of the air passing over the outside of the airplane.

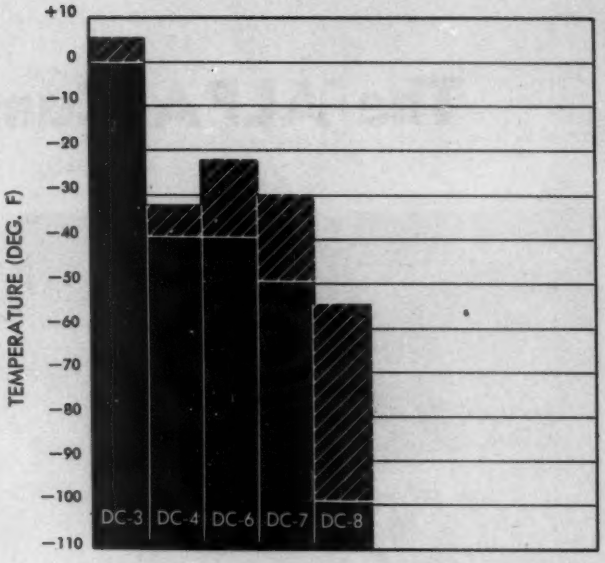
To simulate the high temperature condition on the ground, heat lamps were placed over the top of the cockpit. The input to the lamps was varied so that a skin temperature variation, previously measured on a DC-7 exposed to bright sun while the airplane was on the ground, was maintained. The design temperature of 95°F dry bulb and 78°F wet bulb were used as the ambient conditions. Although the 95°F dry bulb temperature was not high, it did give a high skin temperature of 160°F. The condition also gave the maximum refrigeration load to cool the cockpit because of its high humidity. Paradoxically, it exceeds the refrigeration load required for a much drier and hotter ambient dry bulb temperature condition of 120°F.

Two Things Wrong

Although the design engineers held many discussions with air line pilots during the development of the first design, the first trial operation proved very disappointing. Nothing seemed to act as had been expected. It had been believed that the air supply to the cockpit should be spread out equally to a number of different outlet and surface locations within the cockpit. Panels under the feet of the crew members were air heated with the air coming in front of the feet through slots at the edge of the panel. Two things were basically wrong with this arrangement. One was that with the high airflow required to maintain sufficient cooling and heating, draughts were created which were noticeable on the ankles both during the heating and cooling conditions. The other was that for the cooling condition, and in many heating conditions, the heated panels gave a cold sensation to the feet. Both of these complaints were corrected by using a low power intensity electrically heated panel built in as part of the air heated panel. The electrical power was sufficiently low so that in case of a wire short, no smoke or fire could be created. This method allowed the amount of airflow through the panels to be greatly reduced and thereby stopped the draughty condition.

Smoke Removal

In the event of an electrical fault, or other fire emergency,



DESIGN OUTSIDE SKIN SURFACE TEMPERATURE
Figure 5

Figure 6

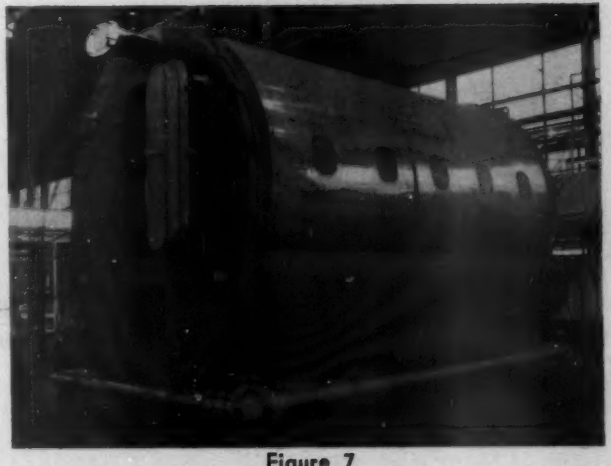
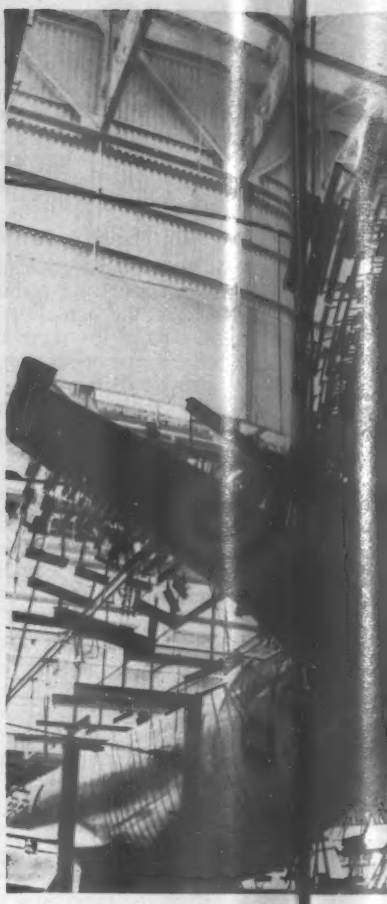


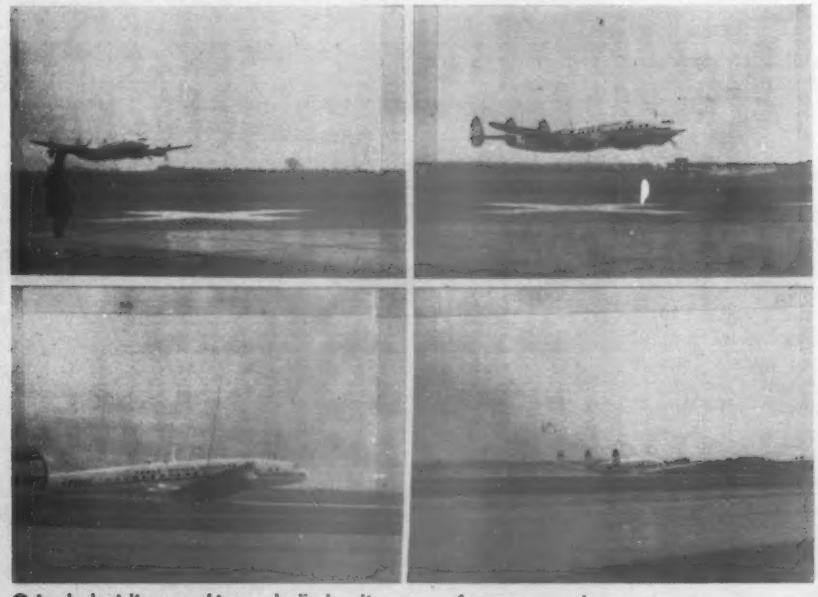
Figure 7

The ALPA Camera

Pan Am MEC meets at the Home Office.

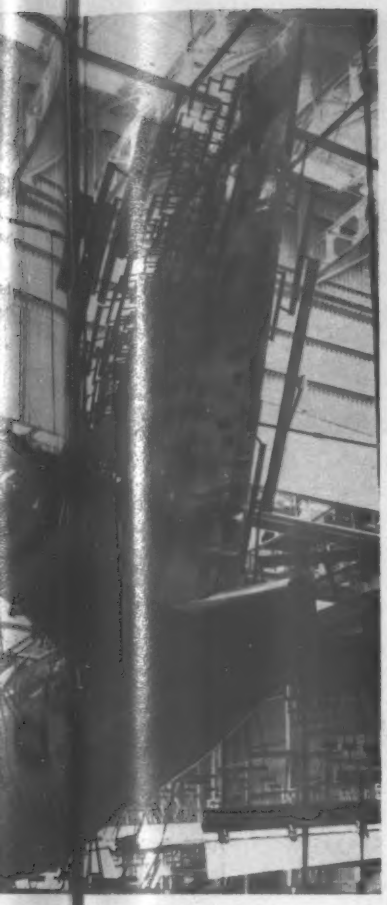


Twisting the tail of a Conv 880 to sin



Crippled airliner making a belly-landing on a foam-covered runway.

Fairchild F-27 "Silver Dart" jetprop to put into s



f a Conv 880 to simulate flight stress.

NWA MEC meets at the Home Office.

Ballot Committee meets at the Home Office. From left, Kay McMurray Executive Vice-President, Keith Cantine (CAP), Don Penn (AAL), Joe McCombs (TWA), Glyn Johns, Council Coordinator, J. Matthews (EAL).

etprop to put into service this month by Bonanza.

Figure 8

Figure 9

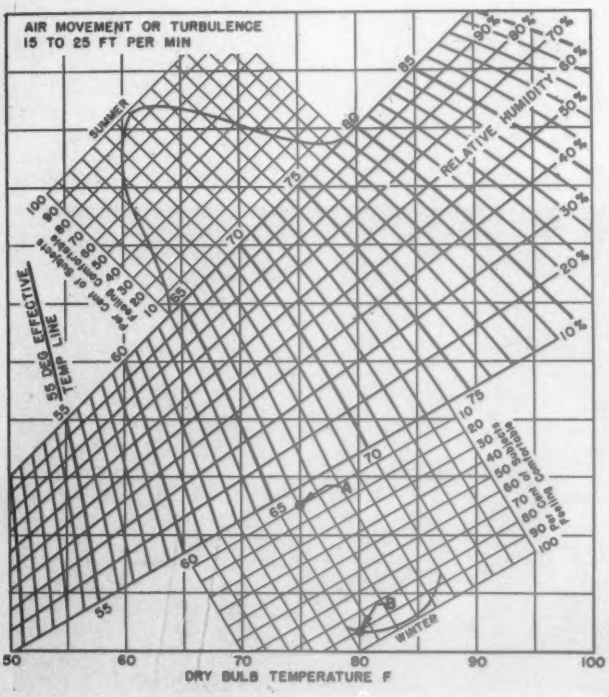


Figure 10

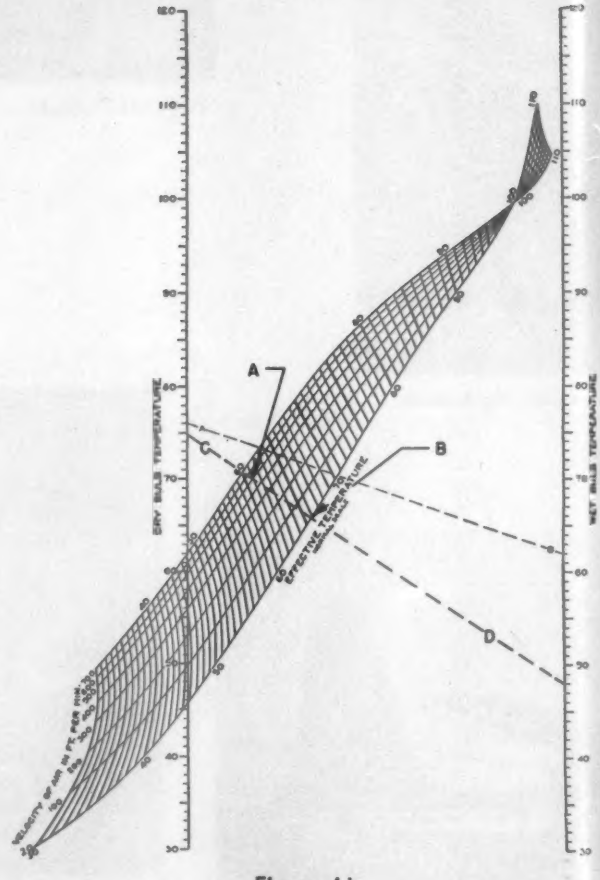


Figure 11

smoke and odor removal is of prime importance to the crew. For good smoke removal, a given quantity of circulating air is required. When the airflow through the floor panels was reduced, another spot had to be found to introduce air without causing draughts. This, by experiment, was found to be through two large, low velocity, overhead grilles.

Fig. 8 shows the cockpit ducting, copilot's floor panels, and one of the low velocity overhead grilles.

The solution to the problem of removing smoke by the use of the normal air conditioning system, without having to depressurize the cabin, was determined, primarily, to be through proper exhausting of the air,. In order to keep

smoke from passing over the faces of the pilots, two basic air exhaust paths were established. One through the overhead instrument panel and the other was through the left and right-hand side consoles. The electrical wire bundles are brought through tunnels to the overhead instrument panel and the side consoles. These also serve as air exhaust ducts to carry the spent air from the cockpit to and through the electrical load center and radio rack. This air serves three purposes after leaving the cockpit; one is to keep the smoke from shorted wires from entering the cockpit; the second is to cool the electrical load center and the radio rack; and the third is to heat the forward baggage compartment by circulating this heated air through double skin passages around the outside of the baggage compartment.

During our test program, an electrical wire was shorted (Fig. 9) but no smoke or objectionable fumes entered the cockpit during this condition. In another test, large quantities of smoke were released from a smoke candle to represent smoke from possibly a brief case accidentally ignited from a cigarette. Good scavenging was noted in not only rapid dissipation of the smoke, but also freedom of the face area of the pilot and flight instruments, from the smoke.

Humidity Control

To keep the crew from experiencing dryness because of the low humidity, either moisture can be added or evaporation from the skin can be maintained at a low level (Figs. 10 and 11). Examination of Fig. 10 shows that with a relative humidity of approximately 5%, a dry bulb temperature of 75°, a velocity of from 15 to 25 feet per minute, (1 mile per hour is 88 feet per minute) an effective temperature, Point A, of 66°F can be maintained. On this same Fig., it can be seen that during winter, or under heating conditions, approximately 95% of the subjects, Point B, were comfortable. The effect of increased velocity can be seen by referring to Fig. 11. From a psychrometric chart, it can be determined that a 5% relative humidity at a 75°F dry bulb is equivalent to a 48°F wet bulb temperature. It can be seen from Fig. 11, Line CD, that by reducing the velocity from 500 feet per minute, Point A, which is common in many of the present day cockpits, to 20 feet per minute, Point B, the effective temperature has been increased and improved by 5°F. Referring back to Fig. 10, it can be seen that this improvement in the effective temperature by the use of low velocity air moves this condition of low humidity within the comfort range. The addition of moisture has many drawbacks such as weight, additional equipment, and the strong possibility that the dew point would be reached in several places within the cockpit. On the other hand, it can be seen that satisfactory conditions can be obtained by keeping the skin evaporation rate low by the use of a low velocity distribution system. Pilots have tried both systems and concluded that the latter is quite acceptable.

We could not close this article without expressing our appreciation to the many pilots who have added their judgment and experience to the efforts of our designers in the development of the features of the DC-8 cockpit.

IFALPA:

Representing The Pilot Viewpoint Internationally

Just As Air Line Pilots Have Had To Organize To Solve Problems Nationally, So Have They Internationally

By Capt. U. McKeough
Australian Air Line Pilots Association

I SUPPOSE that, during the past few years, when you have occasionally read a report of an I.F.A.L.P.A. Conference, or some story of technical work emanating from it, or the names of the delegates attending, the question has exercised your mind as it used to do mine. As one, who, until fairly recently, had no actual connection with IFALPA work, I feel I may be able to put you "a little more in the picture." Let me say, at once, that if you realize the necessity and advantage of your own Association, you are well on your way to an appreciation of IFALPA.

Shortly after World War II, the United Nations organization came into being and spawned several subdivisions of various specialist organizations one of which was ICAO, which, when firmly established, dropped the "Provisional" to become the International Civil Aviation Organization. The fact that the organization was to make decisions on aviation policy without pilot representation began to interest several pilots' associations.

World Citizens

Air line pilots began to realize that they were citizens of the world in many respects. A pilot's daily work took him across the boundaries of many states and foreign countries, and he was often dependent upon the governments of distant municipalities, states or foreign countries to provide him with the essential facilities necessary to his personal safety and that of his passengers. He became, therefore, vitally concerned with national and international affairs, and remains so today. The British, Dutch, or American or any other pilots are as concerned with airport facilities in other countries as in their own.

It seemed that the pilot had to put himself in a position in aviation to exercise aggressive leadership, and to exercise leadership he had to do it in an organized manner. In the international field he had to do it through an international organization, complementary to the leadership exercised through his national association at home.

This was the reason for the birth of IFALPA in 1948, with a membership of sixteen associations. The federation now numbers 24 associations and represents more than 20,000 pilots.

IFALPA is a federation. It is a federation of pilots' associations. It is not a union of pilots, and it is not a pilots'

(Continued On Page 14)

Flying Tiger Receives Daedalian Safety Trophy

CAPT. GREGORY P. THOMAS, Flying Tiger Line, Inc., has been awarded the Order of Daedalians flight safety trophy as the outstanding air line pilot of the year.

Capt. Thomas was presented the trophy and a plaque during ceremonies at the Wings Club in New York City. The Order of Daedalians, composed of World War I pilot officers, was represented by Lt. Gen. Idwal H. Edwards, USAF (Ret.).

The Flying Tiger captain was chosen for the award for his successful emergency landing, June 21, 1957, of a Douglas DC-6A on a sandbar in Jamaica Bay southwest of Idlewild International Airport, New York, when the engines of the aircraft failed on take off. The crew and six passengers escaped serious injury.

Capt. Thomas' performance in avoiding populated areas near the airport and making a successful landing was described as "in the best character and tradition of the professional air line pilot."

Second Recipient of Award

It was the second year the award had been made to an air line pilot. The first recipient was Capt. Richard N. Ogg, Pan American, who successfully ditched an air liner in the Pacific Ocean, Oct. 16, 1956.

The Order of Daedalians was organized in 1934, to transmit to posterity, the traditions of flying which were established by World War I pilot officers of the United States Air Service.

For many years the Order has made flight safety its major activity. Initially, military flight safety was of major concern, then in 1957, an award was established for civilian pilots.

The order is named after the Greek hero of fable, Daedalus, who fitted wings for his son, Icarus, the first man to fly according to the legend.

"Did Anything for a Ride"

Capt. Thomas, 45, an active member of the Air Line Pilots Association, has flying since 1932. He serviced airplanes, washed them, and as he says, "did anything for a ride." He even traded his motorcycle for flying lessons.

"The prewar 1930s were filled by flying all kinds of old time airplanes," Capt. Thomas says, "the old Standards, Fleets, Fledglings, Wacos, Stinsons—doing everything from dusting to flying charters, barnstorming and training students."

When World War II started, Capt. Thomas became a ferry pilot flying to England. When the United States entered the war he joined the U. S. Army Air Forces and spent three years as a pilot, squadron commander, and air base commander.

After the war, he flew for Pacific Overseas Airlines, Standard Airlines, Trans Ocean, and then Pak Air Ltd., in Karachi, Pakistan, as chief pilot. He returned to the U. S. in 1950 and joined the Flying Tiger line.

Capt. Thomas lives in Woodland Hills, Calif.

Pilot-Author Tells Approach Light Story

TWA Capt. R. N. (Bob) Buck is the author of an article which will appear in the April issue of the Reader's Digest on the ALPA centerline approach light system entitled, "Why Can't *All* Airports Have These Lifesaving Lights?" The article explains in laymen's language why the lights are needed and traces their development to AA pilot Ernie Cutrell.

Other lights were tried, Buck points out, but some were worse than no lights at all, the slopeline system for one. "These were used at Idlewild for a while, and the pilots cussed them and asked for their replacement," Buck states. A lot of people got killed before it was done. An Italian airliner came in one morning. The captain was tired, the weather bad. He crashed right on the slopelines. After that the slopeline lights were replaced with Cutrell's centerline-approach ones. Other people thought these lights were right, too, and the centerline system was adopted by the International Civil Aviation Organization. . . . I only wish our government agencies and bureaus would get going and install them at the other airports that need them."

FLYERS' FORUM

Personal Opinion From Letters To The Editor

Strikes, Wars Obsolete?

Military war and labor strikes have much in common: Both seek to settle basic disputes and achieve objectives by the threat or use of force after voluntary means of negotiation have proven fruitless; both have had a history of successes and failures in achieving their objectives; both have long had the sanction of the controlling portion of society as legitimate means to an end.

At the same time both are earning the anathema of increasing portions of society because each employs methods which are close to that of the jungle as compared to the human attributes of reason and morality and because each causes the suffering of the innocent and uninvolved.

Both war and strikes will one day be rejected by society, not only because of revulsion toward the use of force by one group against another, but also for the practical reason that they will no longer achieve their objectives.

According to Margaret Meade, the anthropologist, war was an invention of society to fulfill a definite purpose; it will not be given up regardless of how barbaric it becomes until something better is invented to take its place. There was a time when warfare achieved results in treasure, land, slaves or prestige—and at minimum cost. Almost universally thinking people are coming to the conclusion that positive results are no longer attainable through war. They approve of a high level of military preparedness as a deterrent to war. But more and more are coming to reject the theory—sometimes expressed in high places—that if nuclear war should come there is no substitute for victory. They believe that such a theory leads to an absurd conclusion: namely that winning a war—victory for our country—is more important than the 40 or 80 or 99 per cent of our people who will have lost their lives in the holocaust. They believe that basic philosophy for Americans—for all mankind—was stated in the Declaration of Independence: "*All men* are entitled to life, liberty, and the pursuit of happiness" and that victory for our country is meaningless apart from that objective.

Increasing numbers are seeking the "invention which will take the place of war." General of the Air Force "Hap" Arnold said in 1948, "It is my conviction, and I know it is the belief of the Air Force, that permanent peace can only be the result of effective international organization. In the meantime, air power now is power for an interim peace which we can sustain while the problem of controlling the forces tending toward war is being solved with the patient wisdom it requires."

Chief Justice Earl Warren said in 1954, "The world's chief need in these next decades will be peace and order, and of all human institutions, law has the best historical claim to satisfy this need."

Combining Arnold and Warren, it would seem that the world requires international organization which, to be effective, must be built around the law—impartial, just and enforceable. It is reasonable to conclude that law, man's invention to outlaw violence at local levels, can also outlaw international violence—war. After all you can't outlaw anything without law. Throughout history, in ever-widening areas, where the law has stepped in, violence has decreased or disappeared. If the nations can establish legal practices and institutions through which to regulate their affairs and settle their differences, they will provide an alternative to war as the ultimate, the most disastrous arbiter. The survival of mankind hangs in the balance.

Does the strike show any parallel to war in its rise and decline as a useful instrument of society? Unquestionably the right to strike had logical beginnings when the laborer had no prerogatives and banded together with others to improve his lot. In those days, legal recourse was meaningless. Labor did not have the money, the know-how, the lawyers to face management equitably in court. The delaying tactics, so common in court procedures, redounded entirely to the benefit of management. The court system itself was not tailored to the give-and-take essential to compromise (nor is it today). So labor rejected litigation and resorted to the one weapon available—the strike—and the public felt obliged to recognize this right.

No one can deny that many gains for labor have been made through the use of the strike or the threat of strike. It has been a useful and necessary tool in the forward march of society. However, the question arises, can any tool, however necessary, which is based on the imposition by force of the will of one group over another, indefinitely remain feasible?

Public revulsion to strikes is growing. The rumblings are becoming ominous because the once widespread sympathy with this means to the objective is no longer widespread. The public is becoming bitter at the suffering of the innocent, the many put out of work by the few strikers, and it believes the plea no longer valid that labor does not have the money or know-how to put up a legal fight for its rights. Restrictive legislation is already being seriously considered in Washington.

I believe it high time for labor to take a good hard look at "the right to strike." Let its experts make their best estimate of the point of diminishing returns. Where in the future will that point be reached—or have we, in certain cases, already passed it? How does the balance sheet add up on an individual strike which results in contractual gains at the cost of x weeks salary loss for the strikers, y dollars loss to the industry, the resentment of fellow employees, the deterioration of company-employee relationships, making future gains more uncertain, the economic decline of a community, resulting in the bitterness of the public, and the self-respect of the individual striker and his family? These are hard questions, but they are important ones and must be faced.

Some day, if not today, we will face the hard fact that the cost of strikes has exceeded the benefits.

Some day, if not today, public antipathy toward the use of force by one group against another will initiate thought and action toward the outlawing entirely of the right to strike, an imposed rather than a voluntary solution. (And let labor not take comfort in supposing that it has such power in Congress as forever to still such clamor.)

Nations will not relinquish their right to wage war until they have the satisfactory something to take its place. Their survival depends upon their willingness to create that something, to extend to the world community the legal institutions and practices through which, from the dawn of history, men have been able, by and large, to settle disputes and maintain peace in their local areas.

Similarly organized labor may not be expected to relinquish the right to strike until there is something to take its place, something so good as to convince it that its interests will thus be far better served than trying to secure objectives by force.

It would be a revolution of unprecedented proportions if the creation of the necessary alternatives could be spearheaded from within the ranks of organized labor, rather than being forced from without. This is too much to expect from the intrenched leadership of most labor organizations, but the Air Line Pilots are in a unique position to lead the way. ALPA could well devote considerable effort to a study of what kind of judicial institutions could be accepted as the alternative. Could the provisions of the Railway Labor Act, which have served well in the past, be expanded, or should entirely new institutions be proposed? How could such tribunals be constituted so that labor and management alike would be satisfied as to their competence, fairness and impartiality? How could they be safeguarded against undue influence from either contending party, and against unreasonable public pressures? What kind of laws could prevent the long-drawn-out delaying tactics which have plagued so many labor negotiations—and at the same time make it not too attractive for either side to give up bargaining and call for judicial intervention? In short, is it possible to establish tribunals, which could guarantee to both labor and management fair decisions concerning their reasonable objectives in a rapidly expanding society?

ALPA could well afford to undertake such a study and indicate its willingness to cooperate with any interested agency. If ALPA were to declare now its intention that, once the acceptable alternative is designed and created, it, for one, would renounce the right to strike, our Association would set a resounding example for the whole labor movement. Furthermore, ALPA would thereby do much to elevate itself to a level of professional prestige which has been the continual hope of its members. And, while so doing, ALPA would in no manner jeopardize any of its existing bargaining rights and techniques.

The effective alternative to war has not yet been created—nor has the effective alternative to strikes. To be satisfactory, both must be better than the institutions they replace. The creation of both imposes no impossible task on mankind, merely asks for the employment of techniques which have been used successfully time and again in other areas. The acceptable alternative will not come through drift, but by conscious, dedicated effort.

Ronald C. McLaughlin,
Captain, Northwest Airlines

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IFALPA . . .

(Continued From Page 11)

association. It is a federation of associations but a federation of autonomous units.

IFALPA's Purpose

Basically, what is the purpose of this federation? The purpose of the federation is exactly the same as the purpose of each member association. It is to represent pilots, to present the pilot viewpoint—but internationally rather than nationally. It gives the pilots an opportunity to speak out in international circles as an organized group and to be able to put into the field one or two representatives who can say with reliance, "I speak for the pilots of the world, and this is what they want. This is their view." IFALPA

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represents pilots, and therefore it should represent the pilots' view and not that of the engineer, traffic officer or traffic controller, though it may have close liaison with them.

We define the problems as a pilot, so that organizations dealing in aviation, whether domestic, or international, look to us for one particular viewpoint—the pilot viewpoint.

IFALPA's Objects

As defined, the objects of the federation are, externally, to provide a democratic body to present an international organization's pilot opinion in the aviation field of conditions of service, international legislation, technical development and standards of safety.

Internally, the objects are to facilitate the exchange and discussion among pilots of all matters of common interest, to facilitate the exchange of information and advice on technical and labor problems, to advance the professional status of the pilot by encouraging progress in his technical standards, and to foster good will and comradeship among the pilots of the world.

How does IFALPA carry out these aims? The pilot viewpoint is placed before ICAO at all regional, divisional and special meetings, at which it has permanent observer status, as does ICAO at IFALPA conferences. Since ICAO handles many complex technical problems, it is necessary that IFALPA be technically ahead at all times, and in this case we are fortunate in having the use of the ALPA technical staff in addition to several extremely accomplished pilots in America and Europe.

Incorporation of Pilots' Views

Pilot opinion is being sought by designers before aircraft are constructed. Those who fly the Boeing 707 will find an aircraft in which the pilot view on cockpit design has been largely accepted, and they will use the basic "T" instrument panel designed by pilots after many years of research. How much time, effort and money would have been saved if pilot opinion had been consulted before the production of some of the "Irish Stew" cockpits in evidence today. The pilot viewpoint is well to the fore in international labor organization discussions, in various national advisory committees, and in the Jet Operations Requirement Panel.

It is true that national associations of air line pilots could obtain the benefits of this technical work in a roundabout way without being members of IFALPA. But they would then be in exactly the same position as an individual pilot who does not join his local association; obtaining benefits without fulfilling obligations.

In the past couple of years IFALPA has branched out strongly into the social and industrial fields, and much benefit to pilots of all countries may yet come from this source. For the first time, IFALPA produced this year its first detailed study in the industrial field. This is a most comprehensive document giving conditions of service in all countries.

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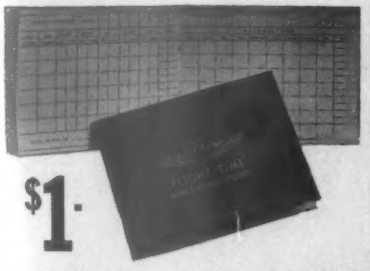

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